

WHAT IS CLAIMED IS:

Sub
a5

1. A surveillance system comprising:
a surveillance camera; and
a surveillance image processor for processing surveillance image data obtained from said surveillance camera,
said surveillance image processor comprising:
supplement information image generation means for imaging supplement information relating to said surveillance image data and generating supplement information image data;
combining means for combining data obtained in middle of JPEG encoding of said surveillance image data with data obtained in middle of JPEG encoding of said supplement information image data; and
Huffman encoding means for conducting Huffman encoding on composite data obtained by said combining means.
2. A surveillance system according to claim 1, wherein said surveillance image processor comprises:
linking means for linking JPEG data for image display obtained by said Huffman encoding means to JPEG data for supplement information image, obtained by conducting JPEG encoding on said supplement information image data.
3. A surveillance system according to claim 1, wherein said surveillance image processor comprises:
display image decoding means for conducting

Huffman decoding on JPEG data for image display obtained by said Huffman encoding means; and

removal means for removing data in middle of JPEG encoding of said supplement information image data from JPEG data for image display subjected to Huffman decoding.

4. A surveillance system according to claim 1, wherein said surveillance image processor comprises:

display image decoding means for conducting Huffman decoding on JPEG data for image display obtained by said Huffman encoding means;

supplement information image decoding means for conducting Huffman decoding on JPEG data for supplement information image obtained by conducting JPEG encoding on said supplement information image data; and

removal means for removing JPEG data for supplement information image subjected to Huffman decoding from JPEG data for image display subjected to Huffman decoding.

5. A surveillance system according to claim 1, wherein said surveillance image processor comprises:

difference information generation means for generating difference information between first supplement information image data relating to first surveillance image data and second supplement information image data relating to second surveillance image data;

difference information JPEG encoding means for

conducting JPEG encoding on said difference information;

difference information linking means for linking JPEG data for image display obtained by said Huffman encoding means to JPEG data for difference information, obtained by said difference information JPEG encoding means.

6. A surveillance system according to claim 1, wherein said surveillance image processor comprises:

feature value generation means for generating feature value peculiar to JPEG data for image display obtained by said Huffman encoding means; and

feature value linking means for linking said JPEG data for image display to said feature value data.

7. A surveillance system according to claim 6, wherein said surveillance image processor comprises:

separation means for separating said JPEG data for image display and said feature value data from linked data obtained by said feature value linking means;

post-separation feature value generation means for generating post-separation feature value data peculiar to the JPEG data for image display obtained by said separation means; and

decision means for deciding that the feature value obtained by said separation means does not coincide with said post-separation feature value data.

8. A surveillance system according to claim 6, wherein said surveillance image processor comprises:

decision means for deciding that linked data obtained by said feature value linking means does not include said feature value data.

9. A surveillance system according to claim 6, wherein said feature value generation means generates as said feature value data, a check sum of a quantized DCT coefficient block obtained by adding a quantized DCT coefficient block obtained in middle of JPEG encoding of said surveillance image data and a quantized DCT coefficient block obtained in middle of JPEG encoding of said supplement information image data.

10. A surveillance system according to claim 6, wherein said feature value generation means generates a hash value of said JPEG data for image display as said feature value data.

11. A surveillance image processor comprising:
input means for inputting a surveillance image picked up by a surveillance camera;

supplement information image generation means for imaging supplement information relating to said surveillance image and generating supplement information image data;

surveillance image compression means for compressing surveillance image data of said surveillance image;

supplement information image compression means for compressing said supplement information image data;
and

supplement information image decoding means for conducting Huffman decoding on compressed data for supplement information image obtained by said supplement information image compression means,

wherein said surveillance image compression means conducts discrete cosine transform and then quantization on said surveillance image data, and

said combining means adds the compressed data for supplement information image subjected to Huffman decoding and the surveillance image data subjected to discrete cosine transform and then quantization.

15. A surveillance image processor according to claim 11, comprising:

surveillance image expander means for conducting Huffman decoding on compressed data for surveillance image obtained by said surveillance image compression means; and

supplement information image decoding means for conducting Huffman decoding on compressed data for supplement information image obtained by said supplement information image compression means, and

said combining means adds the compressed data for surveillance image subjected to Huffman decoding and the compressed data for supplement information image subjected to Huffman decoding.

16. A surveillance image processor comprising:

input means for inputting a surveillance image picked up by a surveillance camera;

supplement information image generation means for imaging supplement information relating to said surveillance image and generating supplement information image data;

compression means for conducting irreversible compression and then reversible compression on image data; and

combining means for combining surveillance image data of said surveillance image subjected to the irreversible compression in said compression means with said supplement information image data subjected to the irreversible compression in said compression means, composite data obtained by said combining means being subjected to reversible compression in said compression means.

17. A surveillance image processor according to claim 16, wherein said combining means combines said surveillance image data after being subjected to discrete cosine transform and before being subjected to Huffman encoding with said supplement information image data after being subjected to discrete cosine transform and before being subjected to Huffman encoding.

18. A surveillance image processor according to claim 16, wherein said combining means combines said surveillance image data after being quantized and before being subjected to Huffman encoding with said supplement information image data after being quantized and before being subjected to Huffman encoding.

Huffman decoding means for conducting Huffman decoding on compressed data for image display, said compressed data for image display being obtained by conducting addition and then Huffman encoding on quantized data obtained by conducting discrete cosine transform and then quantization on surveillance image data of a surveillance image supplied from a surveillance camera and quantized data obtained by conducting discrete cosine transform and then quantization on supplement information image data relating to said surveillance image;

decoding means for conducting dequantization and then inverse discrete cosine transform on the quantized data of said surveillance image data separated by said separation means; and

20. A surveillance image reproducing device according to claim 19, wherein said separation means subtracts the quantized data of said supplement information image data from the compressed data for image display subjected to Huffman decoding.

21. A surveillance method comprising the steps of:

imaging said supplement information and
thereby generating supplement information image data, at
time of recording;

conducting Huffman encoding on said composite data, at time of recording;

conducting Huffman decoding on the recorded data, at time of reproducing;

displaying resultant data, at time of reproducing.

imaging said supplement information and
thereby generating supplement information image data, at
time of recording;

combining data obtained by quantizing surveillance image data of said surveillance image with data obtained by quantizing image data of said supplement information and thereby obtaining composite data, at time of recording;

conducting Huffman encoding on said composite data, at time of recording;

recording the composite data subjected to Huffman encoding, at time of recording;

conducting Huffman decoding on the recorded data, at time of reproducing;

dequantizing the recorded data subjected to Huffman decoding, at time of reproducing; and

displaying resultant data, at time of reproducing.

23. A surveillance image processing method comprising the steps of:

acquiring a surveillance image obtained by a surveillance camera;

acquiring supplement information relating to the surveillance image;

imaging said supplement information and thereby generating supplement information image data; and

combining surveillance image data of said surveillance image after being subjected to irreversible compression and before being subjected to reversible compression with said supplement information image data

after being subjected to irreversible compression and before being subjected to reversible compression.

24. A surveillance image processing method comprising the steps of:

acquiring a surveillance image obtained by a surveillance camera;

acquiring supplement information relating to the surveillance image;

imaging said supplement information and thereby generating supplement information image data; and

combining a quantized discrete cosine transform coefficient block of surveillance image data of said surveillance image with a quantized discrete cosine transform coefficient block of said supplement information image data.